



**UNITED STATES DEPARTMENT OF COMMERCE  
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08/737042

APPLICATION NO. 08/737,042	FILING DATE 10/30/96	FIRST NAMED INVENTOR HEED	ATTORNEY DOCKET NO. B C-35620
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QM02/0705

EXAMINER

LEO, L

ART UNIT

PAPER NUMBER

3743

DATE MAILED:

07/05/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

08/737,042

Applicant(s)

Heed

Examiner

Leonard R. Leo

Art Unit

3743



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1) ☒ Responsive to communication(s) filed on Mar 29, 2001

2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

4) ☒ Claim(s) 5 and 7-11 is/are pending in the application.

4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.

6) ☒ Claim(s) 5 and 7-11 is/are rejected.

7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.

8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some\* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

19) ☐ Notice of Informal Patent Application (PTO-152)

17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_

20) ☐ Other: \_\_\_\_\_

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### **DETAILED ACTION**

The amendment filed March 29, 2001 has been entered. Claims 5 and 7-11 are pending.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The "means plus function" recitation in the last paragraph of claim 9 is indefinite, in that, there appears to be a dual recitation of claim language.

Regarding claims 7-8 and 10-11, the recitation of "Said" should not be capitalized.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 5 and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over ACV (SU 800,500) in view of Hultgren.

ACV discloses a recuperative heat exchanger comprising a casing having inlet and outlet ports 2-5; a heat transfer package having a plurality of connected rectangular planar elements with corrugations extending the entire length and width thereof, the planar elements being folded in an accordion-like manner; but does not disclose corrugations greater than 45 degrees with respect to the longitudinal flow direction.

Hultgren discloses a heat exchanger comprising a casing 2 defined by top and bottom ends 3 and lengthwise 5 and widthwise 4 sidewalls having inlet and outlet ports 7-10; a heat transfer package 11 (20) having a plurality of connected rectangular planar elements 24 with corrugations 17, the planar elements being folded in an accordion-like manner; wherein the corrugations 17 extend at any angle with respect to the net flow path for the purpose of achieving a desired flow resistance or pressure drop (column 2, lines 34-41 and column 3, lines 24-30).

Since ACV and Hultgren are both from the same field of endeavor and/or analogous art, the purpose disclosed by Hultgren would have been recognized in the pertinent art of ACV.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in ACV corrugations extending at any angle with respect to

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the net flow path for the purpose of achieving a desired flow resistance or pressure drop as recognized by Hultgren.

Regarding claims 7-8 and 10-11, Hultgren discloses top and bottom end covering elements 13 (Figure 1, column 3, line 67 to column 4, line 2).

*Response to Arguments*

The rejections in view of Davis and Jenssen are withdrawn.

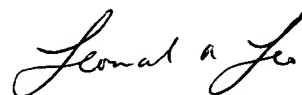
No further comments are deemed necessary at this time.

*Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry of a general nature, relating to the status of this application or clerical nature (i.e. missing or incomplete references, missing or incomplete Office actions or forms) should be directed to the Technology Center 3700 Customer Service whose telephone number is (703) 306-5648.

Any inquiry concerning this Office action should be directed to Leonard R. Leo whose telephone number is (703) 308-2611.



LEONARD R. LEO  
PRIMARY EXAMINER  
ART UNIT 3743

June 26, 2001